

### **REMARKS**

The Examiner has required that Figures 3 and 4 be designated by a legend such as --Prior Art--. The drawings have been amended accordingly herein.

Claims 1–5 were rejected under 35 U.S.C. 103(a) over the admitted prior art (hereinafter “APA”) in view of U.S. Patent No. 6,700,698 to Scott (hereinafter “Scott”). Further, claim 2 was rejected under 35 U.S.C. 103(a) over APA and Scott in view of U.S. Patent No. 5,546,222 to Plaessmann et al. (hereinafter “Plaessmann”). Claim 1 has been amended to better distinguish from the prior art and claim 2 has been amended to be consistent therewith. For the following reasons, the rejection has been rendered moot by the amendment.

Regarding amended claim 1, neither APA nor Scott nor Plaessmann nor any combination thereof teaches or suggests “*a pair of optical systems* provided on the optical path of said laser beam between said laser medium and said pair of reflection portions respectively for changing the state of the laser in said laser medium; and *a pair of movement portions* for moving said optical systems respectively along the optical axis of the laser,” as required. With reference to claim 2, the Examiner has already acknowledged that “APA and Scott do not teach explicitly that there are a pair of optical systems . . .” However, the Examiner dismissed this difference, stating that, according to In re Harza, a duplication of parts is not patentably significant without a showing of a new and unexpected result. Alternatively, in rejecting claim 2, the Examiner cites Plaessmann as disclosing the a pair of optical systems. The Examiner cites teachings from Plaessmann as motivation to modify the teachings of Scott to include a pair of optical systems, as presently claimed. For the following reasons, Applicant submits that, at the time the present invention was made, one of ordinary skill in the art would not have been motivated to combine the teachings of the cited references to arrive at the presently claimed invention.

The teachings of APA relate to a laser regenerative amplifier, i.e. a laser resonator. One of ordinary skill in the art will appreciate that, in a laser resonator, due to the formation of oscillation modes of the laser beam, the handling of the thermal lensing effect becomes difficult. In contrast, the teachings of Scott and Plaesmann relate to amplifiers for generating linear phenomena. One of ordinary skill in the art will also appreciate that, in such amplifiers, since no oscillation modes of the laser beam are formed, the handling of the thermal lensing effect is easy. Therefore, one of ordinary skill in the art, facing the difficulties relating to the lensing effect of the laser resonator of the APA would not look to the teachings of Scott and Plaesmann for a solution, since Scott and Plaesmann relate to a technology that does not have these difficulties. Therefore, since one of ordinary skill in the art would not find any suggestion or motivation to make the proposed combination and/or modification, no *prima facie* case of obviousness can be made in order to support a rejection under 35 U.S.C. 103(a).

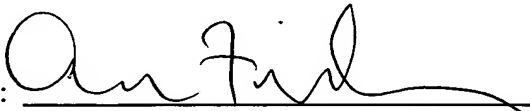
Further, nothing in the teachings of the prior art predicts that the lensing difficulties in the laser resonator of APA would be overcome by modifying it to include “a *pair of optical systems* provided on the optical path of said laser beam between said laser medium” and “a *pair of movement portions* for moving said optical systems respectively along the optical axis of the laser,” as presently claimed. By providing two optical systems that are movable in the direction of the optical axis on both sides of the laser medium, achieves the specific effect of being able to accurately compensate for the thermal lensing effect in a laser resonator, which is considerably more difficult to handle in comparison to the amplifiers for generating linear phenomena described in Scott and Plaesmann. By provided pairs of optical systems and movement portions in a laser resonator, a benefit not realized by the amplifiers of the cited references is achieved. The “pair” limitations in claim 1 of the present application are patentable distinctions and thus,

even if APA, Scott, Plaesmann were combined, every limitation of amended claim 1 would not be taught or suggested by the resulting combination or modification.

Therefore, for all of the reasons stated above, claim 1 and its dependent claims 2-5 are patentable over the prior art of record.

If there are any additional fees resulting from this communication, please charge same to our Deposit Account No. 16-0820, our Order No. 35861.

Respectfully submitted,  
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Date: July 7, 2005